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09/834,954	04/16/2001	Tomohide Terashima	57454-062	5366

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EXAMINER
MONDT, JOHANNES P

ART UNIT	PAPER NUMBER
2826	

DATE MAILED: 06/04/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/834,954	Applicant(s) TERASHIMA, TOMOHIDE	
	Examiner Johannes P Mondt	Art Unit 2826	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 January 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-4 and 6-13* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4 and 10-13* is/are rejected.

7)☒ Claim(s) *3 and 6-9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☒ Interview Summary (PTO-413) Paper No(s). 12 .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

In view of the issues discussed during the telephonic interviews (cf. Interview Summary of Paper No. 12) with Applicant's representative on May 17, 19 and 20, 2003, the examiner withdraws Office Action of Paper No. 11 and herewith submits in its place the following Office Action.

Response to Arguments

The further limitation added to claim 1, in particular the existence and positioning of a gap directly underneath the second impurity region (of conductivity type opposite to that of the second buried impurity region) has overcome the rejections made under U.S.C. 103(a) of claim 1. The rejections under 35 USC 112, first paragraph, of claims 2-3 and 11 are withdrawn because in amended form it is the first impurity region rather than the electrode that is sandwiched between said third impurity region and said semiconductor layer (for disclosure see for instance Figure 1, in which the first impurity region 6 is sandwiched between the third impurity region 7 and the semiconductor layer 2).

New art rejections for claims 1, 2, 4 and 10-13 citing Mosher et al are included. The examiner has discovered that a depletion layer of a width of the order of the Debye length exists around any P-N junction, as explained in S.M. Sze, "Physics of Semiconductor Devices", second edition, pp. 74-79 (John Wiley & Sons, 1981). In the absence of said depletion layer diffusion of charge carriers between the p-type and n-type regions abutting said P-N junction would not be limited, because the diffusion

potential, built up by a small degree of diffusion of charge carriers across the P-N junction, would be absent as well, because the depletion layer is an inevitable consequence of said diffusion potential, while uninhibited diffusion of charge carriers across said P-N junction would make it impossible to secure the withstand voltage at its level with said depletion layer present.

Furthermore, claim 10 in its present form appears to be undisclosed, because none of the 29 Figures on the invention shows a buried impurity region (of first conductivity type, per definition) formed between the semiconductor substrate and the semiconductor layer such that said buried impurity region is in electrical contact with a first impurity region of the same (first) conductivity type formed on the surface of said semiconductor layer, nor is there any mention in the disclosure of a lead such as a wire providing an electrical connection. The only conductivity type for said buried impurity region that comes into consideration is n-type, because none of the p-type buried impurity regions are formed in between the semiconductor substrate 1 and the semiconductor layer 2, but none of the Figures 1-29 show said n-type buried impurity layer to be in electrical contact with any impurity region of the same (first) conductivity type while said impurity region of the same (first) conductivity type is formed on the surface of said semiconductor layer 2. Therefore, a rejection under 35 USC § 112, first paragraph, of claim 10 and dependent claims 11-13 must herewith be issued.

The rejections under 35 U.S.C. 103(a) of claims 10 and 12-13 as being unpatentable over Ito are, however, withdrawn in view of the lack of obviousness: Ito teaches a different embodiment on which the claims do not read for the specific case of

an active (switching) device, and hence can be said to teach against the application of the embodiment that teaches claim 10 to the case of a switching device.

Finally, claim 11 only is disclosed if "said first impurity region" on line 5 is replaced by "said second impurity region".

Claim Objections

1. ***Claim 10*** is objected to because of the following informalities: the verbiage "said second buried impurity region" should be replaced by "said buried impurity region". Appropriate correction is required.

2. ***Claim 11*** is objected to because of the following informalities: "said first impurity region" (line 5) should be replaced by "said second impurity". Appropriate correction is required.

Claim Rejections - 35 USC § 112

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. ***Claims 10-13*** are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, the only conductivity type for said buried impurity region that

comes into consideration is n-type, because none of the p-type buried impurity regions are formed in between the semiconductor substrate 1 and the semiconductor layer 2. However, none of the Figures 1-29 show said n-type buried impurity layer to be in electrical contact with any impurity region of the same (first) conductivity type with said impurity region of the same (first) conductivity type being formed on the surface of said semiconductor layer 2.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. ***Claims 1, 4, 10, and 12-13*** are rejected under 35 U.S.C. 102(b) as being anticipated by Mosher et al (5,256,582). Mosher et al teach (cf. Fig. 11) a semiconductor device including:

a semiconductor substrate 12/14/20 (cf. column 3, lines 25-28 and column 4, line 23);

a semiconductor layer 52 (cf. column 5, lines 23-25) of first conductivity type (n-type) formed on the main surface of the semiconductor substrate;

a first buried impurity region 24 (cf. column 4, lines 20-31) of first conductivity type (n-type) formed between said semiconductor layer and said semiconductor substrate;

a second buried impurity region 42 (cf. column 4, lines 44-48) of second conductivity type (p-type);

a first impurity region 54 (cf. column 5, lines 40-43) of second conductivity type (p-type) formed in the surface of said semiconductor layer and electrically connected to said second buried impurity region;

a second impurity region 79 (cf. column 9, lines 14-19) of first conductivity type formed in the surface of said semiconductor layer located in a region above said second buried impurity region ("above", according to Merriam-Webster Collegiate Dictionary, tenth edition, means "in a higher place than"); and

a semiconductor element (emitter, base, collector; cf. Figure 11) which includes said first impurity region 54 and said second impurity region 79 and which has a switching function (namely: through the voltage to the base) (cf. column 2) formed on the surface of said semiconductor layer, wherein the withstand voltage is secured by a depletion layer, intrinsically present around every P-N interface (cf. e.g. Sze, S.M.: "Physics of Semiconductor Devices", John Wiley and Sons, second ed., 1981, pp. 74-79) and oriented with regard to the current channel exactly as it does in the invention, hence securing the withstand voltage under the condition when the semiconductor element is turned OFF (if the depletion region would not exist, then the diffusion potential would not exist, as the diffusion potential inevitably causes the depletion layer; but in the absence of the diffusion potential the diffusion could continue indefinitely, leading to voltage breakdown; cf. Sze, loc. cit., pp. 74-79); and said buried impurity region includes a first gap part wherein said second buried impurity region is disconnected, said gap part of the second buried impurity region being positioned directly beneath said second impurity region 79.

In conclusion, Mosher et al anticipate claim 1.

With regard to claim 4: said semiconductor element includes a "fifth" impurity region of the second conductivity type (the other of the two regions 54) (cf. Figure 11). In conclusion, Mosher et al anticipate claim 4.

With regard to claim 10: Mosher et al teach (Figure 11) a semiconductor substrate 12/14/20 (cf. (cf. column 3, lines 25-28 and column 4, line 23);

a semiconductor layer 52 (cf. column 5, lines 23-25) of first conductivity type (n-type) formed on the main surface of the semiconductor substrate;

a buried impurity region 24 (cf. column 4, lines 20-31) of first conductivity type (n-type) formed between said semiconductor layer and said semiconductor substrate;

a first impurity region 79 (cf. column 9, lines 14-19) formed on the surface of said semiconductor layer (claimed electrical connection is undisclosed by Applicant, see rejection under U.S.C. 112, first paragraph, as included above);

a second impurity region 54 (cf. column 5, lines 40-46) of second conductivity type (p-type) formed on a surface of said semiconductor layer located in a region above said buried impurity region 24 ("above", according to Merriam-Webster Collegiate Dictionary, tenth edition, means "in a higher place than"); and

a semiconductor element (transistor device; cf. column 2) which includes said first and second impurity regions (79 is the emitter region, 54 contact region to the base region) and which has a switching function (through the application of a voltage to the base; this switching function is intrinsic to the transistor device) formed on the surface of the semiconductor layer (the switching function resides in the base, which is on the surface of the semiconductor layer);

wherein the withstand voltage is secured by a depletion layer, intrinsically present around every P-N interface (cf. e.g. Sze, S.M.: "Physics of Semiconductor Devices", John Wiley and Sons, second ed., 1981, pp. 74-79) extending from an interface between said second impurity region 54 said semiconductor layer 52 and oriented with regard to the current channel exactly as it does in the invention, hence securing the withstand voltage under the condition when the semiconductor element is turned OFF. Please note that if the depletion region would not exist, then the diffusion potential would not exist, as the diffusion potential inevitably causes the depletion layer; but in the absence of the diffusion potential the diffusion could continue indefinitely, leading to voltage breakdown (cf. Sze, loc. cit., pp. 74-79); and

said buried impurity region includes a gap part wherein said second buried impurity region is disconnected, said gap part of the buried impurity region (N.B.: this claim has no "second" buried impurity region; see objection to claim 10) being positioned directly beneath said second impurity region 79.

In conclusion, Mosher et al anticipate claim 10.

With regard to claim 12: there are two impurity regions 54 of the second conductivity type (p-type) formed on a surface of said semiconductor layer 52, and hence there is a fourth impurity region 54 of second conductivity type (p-type) formed on a surface of said semiconductor layer.

With regard to claim 13: the said gap part is formed parallel to the line connecting the separate parts of said buried impurity region 24 (i.e., horizontal in the figure), and hence said gap part is formed in the direction to which the depletion layer

extends, because the depletion extends from, i.e., normal to, the P-N junction between the semiconductor layer 52 and said second impurity region 54 (cf. Figure 11).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. ***Claims 2 and 11*** are rejected under 35 U.S.C. 103(a) as being unpatentable over Mosher et al (5,256,582) in view of Isaac et al (4,495,512). As detailed above, Mosher et al anticipate both claims 1 and 10. Mosher et al also teach a third impurity region 55 (cf. column 6, lines 45-46) formed on the surface of 54 (region 54 is both the first impurity region of second conductivity type (p-type) 54 in claim 1, and the second impurity region of second conductivity type in claim 10) so as to be surrounded by 54; and an electrode part ("BASE") formed over 54, 54 being sandwiched between said third impurity region 55 and said semiconductor layer 52 with an insulating film in between said electrode part and 54. Mosher et al do not necessarily teach the further limitations as defined by either claim 2 (dependent on claim 1) or claim 11 (dependent on claim 10) that pertain to the conductivity type of said third impurity region 55. However, in a patent on the improvement of a base contact in a bipolar transistor (cf. title and abstract) and hence analogous art, Isaac teaches a base contact in which the emitter 3 and extrinsic base region 4 have opposite conductivity type such that the

conductivity type of the emitter corresponds to that of the underlying collector 1 as part of a structure with diminished resistance of said base contact (cf. column 2, lines 20-28 and column 4, lines 11-45).

Motivation to include the teaching by Isaac in this regard flows from the advantage of reduced contact resistance. *Combination* of said teaching with the invention by Mosher only requires to change the doping of region 55 to n-type through the application of, for instance phosphorus ion implantation. *Success* in implementing the combination can therefore be reasonably expected.

Allowable Subject Matter

7. ***Claims 3 and 6-9*** are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

8. The following is a statement of reasons for the indication of allowable subject matter:

On claim 3, in Mosher et al 5,256,582) there is no p-type impurity region in contact with said second impurity region 79 of second conductivity type as defined in claim 1;

On claims 6-7, in Mosher et al there is only one first gap part (DUF regions are implanted with antimony);

On claim 8, in Mosher et al said first buried impurity region does not have a recessed part;

On claim 9, in Mosher et al there is no uneven junction interface between said first and second buried impurity regions.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Farrenkopf et al (5,899,714).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Johannes P Mondt whose telephone number is 703-306-0531. The examiner can normally be reached on 8:00 - 18:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J Flynn can be reached on 703-308-6601. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

JPM
May 26, 2003

Interview Summary	Application No. 09/834,954	Applicant(s) TERASHIMA, TOMOHIDE	
	Examiner Johannes P Mondt	Art Unit 2826	

All participants (applicant, applicant's representative, PTO personnel):

(1) *Johannes P Mondt*. (3)_____.

(2) *Attorney Scott Paul (Reg. No.: 42,984)*. (4)_____.

Date of Interview: _____.

Type: a)☒ Telephonic b)☐ Video Conference
c)☐ Personal [copy given to: 1)☐ applicant 2)☐ applicant's representative]

Exhibit shown or demonstration conducted: d)☐ Yes e)☐ No.
If Yes, brief description: _____.

Claim(s) discussed: *2,3 and 11; 10 and 12-13*.

Identification of prior art discussed: *Ito (6,051457)*.

Agreement with respect to the claims f)☐ was reached. g)☒ was not reached. h)☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: *See Continuation Sheet*.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

NATHAN J. FLYNN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

_____
Examiner's signature, if required

Summary of Record of Interview Requirements

Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

1) A brief description of the nature of any exhibit shown or any demonstration conducted,
2) an identification of the claims discussed,
3) an identification of the specific prior art discussed,
4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
5) a brief identification of the general thrust of the principal arguments presented to the examiner,
   (The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
6) a general indication of any other pertinent matters discussed, and
7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

Continuation of Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: The rejection under 35 USC 112, first paragraph of claims 2, 3 and 11 is withdrawn, as in amended form region 6 is sandwiched between the third impurity diffusion region 7 and the semiconductor layer 2 with the insulation film 51 in between the electrode part 11 and region 6. Applicant traversed the art rejection under 35 USC 103(a) of claims 10- and 12-13 because said second impurity region 26 of second conductivity type allegedly is not formed on a surface of said semiconductor layer. However, the examiner responded that the two seemingly disjointed regions 32 form a contiguous region 19 of the same conductivity type also underneath said second impurity region 26. The only distinguishing feature between 19 and the regions 32 within 19 is thus one of doping concentration level, said regions 32 being comprised in 19 and being of the same conductivity type, and hence a repeat of the rejection with a change in numeral is not necessarily impossible because of Applicant's argument. While a typographical error in the Office Action summary characterized Office Action of Paper No. 11 mailed 03/14/03 as final, in the actual text of said Office Action, finality was neither stated nor implied. Furthermore, Form 1472, and consequently the electronic PALM system, lists said Office Action as Non-Final. With apologies, the examiner herewith explicitly reiterates that said Office Action of Paper No. 11 was a NON-FINAL rejection. Finally, the examiner stated that claim 10 reads on none of the 29 Figures in the disclosure, warranting a rejection under 112, first paragraph. For these reasons the examiner will issue a Non-Final Rejection to replace said Non-Final Rejection.